



# Energy Movement Evolution

## Projected Increase in Movement of Oil, Coal, & Other Commodities



- Alberta oil sands exports by tank ships from Vancouver BC will increase by approximately 210 crude oil tankers per year through Salish Sea waters by 2017, a 300% increase from the current level.



- 2 proposed coal terminals in Longview and Cherry Point would increase coal export by:
  - 54 million metric ton = 450 ships (Gateway Pacific Terminal Project)
  - 44 million metric tons of coal = 730 large ships (Millennium Terminal Project)
- This increase in vessel traffic will bring additional fuel transfer operations in both the Puget Sound and Columbia River.



- Kinder Morgan Transmountain Pipeline expansion to bring more product from Canada to US (company estimates an increase from 170,000 barrels to 225,000 barrels per day).



- We expect an increase into the state of oil sands from Canada and Bakken shale oil from North Dakota and Montana. There are 9 existing and proposed terminals that could receive crude oil by rail.
  - 1 unit train = 100-120 rail cars
  - 1 rail car = carries 25,200 (600 barrels) to 31,500 (750 barrels) of crude oil
  - 1 unit train (with 100 rail cars) = carries 2.5 – 3.1 million gallons of crude oil
  - 10 unit train = 1 large tanker

\* Volume calculation based on 5 years average.

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